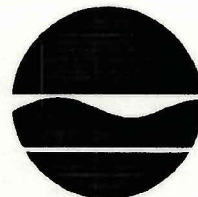


New York State Department of Environmental Conservation
Division of Mineral Resources - Room 202
50 Wolf Road, Albany, New York 12233-6500
Telephone: (518) 457-0100



Thomas C. Jorling
Commissioner

December 11, 1992

Mr. Michael J. Schumacher
Minerals Development Engineer
Akzo Salt Inc.
P.O. Box 352
Clarks Summit, PA 18411-0352

Dear Mr. Schumacher:

This is in response to your request to conduct oil padding operations on Well No. 58 (API #31-097-21467) at your Watkins Glen solution salt mining facility. The stated purpose of injecting up to 30,000 gallons of No. 2 fuel oil into Well No. 58 is to form a protective oil pad or blanket at the top of the cavern to inhibit upward vertical growth and promote outward solutioning of the cavern.

It is our understanding that protective pads of air, fuel oil or propane have previously been used without incident at the Watkins Glen facility and that no other active well in the field currently has any type of pad in place. Discussions with state regulatory personnel in Ohio and Michigan also revealed that there have been no problems with fuel oil pad usage at Akzo's solution salt mining facilities in either state.

Below is a summary of pertinent well construction information, and proposed padding and operating data. Please notify me immediately if any of the below information is incorrect or inaccurate.

Well Construction

- Two steel well casings are fully cemented to surface. The 9 $\frac{5}{8}$ " production casing is constructed with standard 8-round threads and couplings with an extra teflon sealing ring to ensure joint integrity.
- The cement bond log run on the well demonstrates isolation of the injection zone from the overlying formations.
- Well No. 58 passed the USEPA mechanical integrity test (MIT) conducted on November 17, 1992 by pressure testing the brine-filled 9 $\frac{5}{8}$ " production casing and open hole with a surface pump pressure of 350 psia for one hour with less than 5 percent pressure loss. Future MIT demonstrations will be conducted in accordance with the USEPA permit.

Proposed Padding and Operating Data

- 5000 gallons of No. 2 fuel oil will be initially injected down the 7" x 9 $\frac{5}{8}$ " annulus followed by additional volumes of oil up to a total of 30,000 gallons as the cavern develops.
- Incidental oil produced during brining will be gravity separated and skimmed from the lined brine pond prior to entering the plant facility.
- Well No. 58 is designed to operate as an injector/producer independent of any other wells or caverns in the field.
- The maximum proposed diameter of the Well No. 58 cavern at maturity is 400 feet and the outermost edge of the cavern at maturity will be approximately 700 feet from the closest existing cavern.

Division of Mineral Resources' approval is granted to inject up to 30,000 gallons of No. 2 fuel oil into solution salt mining Well No. 58 at your Watkins Glen facility subject to the following conditions:

1. Prior to fuel oil injection, Akzo shall provide the Department with a subsidence monitoring program, including locations of monuments and planned frequency of surveying, for possible subsidence due to solutioning at Well No. 58. This program is subject to Department approval.
2. Prior to fuel oil injection, Akzo shall provide the Department with a contingency plan for the removal and disposal of any produced fuel oil that enters the brine pond and any precautions Akzo will take to prevent possible discharge of oil to Seneca Lake should fuel oil enter the plant facility. This plan is subject to Department approval.
3. Whenever fuel oil is injected or removed, it shall be reported in the Quarterly UIC report, and copies of the report shall be sent to the Division of Mineral Resources' offices in Albany and Avon. The Quarterly UIC report will be acceptable provided it contains the following information:
 - well number
 - amount in gallons of oil injected and removed
 - name of manufacturer and type of oil (injection only)
4. A Material Safety Data Sheet (MSDS) for the fuel oil shall be provided to the Department with the initial Quarterly UIC report and whenever a change is made in the type or manufacturer of the injected oil.
5. Non-routine incidents such as the abnormal loss of fluid, indicated leakage, or any other anomalous condition shall be reported to the Department immediately.
6. NYSDEC approval to inject oil is contingent upon Akzo receiving approval from the USEPA.

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of pages 3

New York State Department of Environm
Division of Mineral Resources - Room 202
50 Wolf Road, Albany, New York 12233-6500
Telephone: (518) 457-0100

To	DERMOTT COURTNEY	From	BRIGGS
Co.	USEPA	Co.	NYSDEC
Dept.		Phone #	
Fax #		Fax #	

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Below is a summary of pertinent well construction information, and proposed padding and operating data. Please notify me immediately if any of the below information is incorrect or inaccurate.

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5. Non-routine incidents such as the abnormal loss of fluid, indicated leakage, or any other anomalous condition shall be reported to the Department immediately.
6. NYSDEC approval to inject oil is contingent upon Akzo receiving approval from the USEPA.

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7. Within 60 days of the initial fuel oil injection into Well No. 58, Akzo shall provide the Department with an accounting of past oil and propane padding operations at the Watkins Glen facility. This accounting shall include, as a minimum, the following information: 1) Well number and API number, 2) Type of pad injected, 3) Volume and date of pad injected, and 4) Volume and date of pad ultimately recovered.

The Division of Mineral Resources' approval to inject fuel oil in conjunction with salt solutioning does not extend to your SPDES discharge permit if oil enters your plant facility. The Department's Division of Water must be contacted if any oil associated with brine production may be or is discharged under the current SPDES permit, which is currently under renewal review. Please call me if you should have any comments or questions regarding this approval.

Sincerely,



Peter S. Briggs
Mineral Resources Specialist II

c: Dermott Courtney, USEPA

DEC-11-1992
15:35
NYS DEC MINERAL RESOURCES
TO 8-154-051-2122642194
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